

A SAFETY ELECTRIC HEATING COOKER

BACKGROUND OF THE INVENTION

Technical Field:

This invention relates to a safety electric heating cooker, and more particularly, to the
5 structure of a safety electric heating cooker.

Background of the Invention:

A safety electric heating cooker, such as an electric frying pan, an electric saucepot, includes an outer shell and a cooker bowl. The outer shell equipped with heaters inside is made of plastics which is not heat-resistant, while the cooker bowl is for accommodating
10 and heating food, of which the temperature is rather high during cooking. In prior art, the outer shell contacts directly with the cooker bowl. If the outer shell is made of common material, it will not pass the safety criterion since it can not resist the high temperature of the cooker bowl. If the outer shell is made of heat-resistant material, the production cost will be rather high.

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SUMMARY OF THE INVENTION

The main object of the present invention is to provide a safety electric heating cooker, which has a decreased production cost and an increased safety performance.

The safety electric heating cooker according to the present invention comprises an
5 outer shell and a cooker bowl, wherein, said cooker further comprises interlaid backstops which are made of heat-resistant materials; said backstops are installed between said outer shell and said cooker bowl, whereby air gap is generated between said outer shell and said cooker bowl.

Said backstops may be a ring installed on said outer shell.

10 Said backstops may be constructed by at least two pieces of blocks installed on said outer shell.

Said backstops may be installed on the top of said outer shell, and the top brim of said cooker bowl is folded outwards, by which said cooker bowl is hanged on said backstops.

Said cooker bowl is shrunk radially at its bottom part which is in the shape of a step or
15 a conical cylinder, said backstops are installed on the inner surface or at the bottom of the inner surface of said outer shell correspondingly, said cooker bowl is supported on said backstops.

By interlaying heat-resistant backstops between said outer shell and cooker bowl, considerable air gap is generated between said outer shell and said cooker bowl, wherein
20 air flows smoothly. Thereby, the outer shell doesn't contact with the hot cooker bowl directly, which prevents the outer shell from melting by heat.

The present invention overcomes the shortcomings of the prior art, decreases the

production cost and increases the safety performance. The present invention is applicable to kitchen apparatus such as electric frying pans, electric saucepots, etc.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows the schematic view of the first embodiment of the safety electric heating cooker according to the present invention;

Fig. 2 is a partial enlarged view of **Fig. 1**;

5 **Fig. 3** is the schematic view illustrating another kind of backstops of the first embodiment of the safety electric heating cooker according to the present invention;

Fig. 4 is a schematic view of the second embodiment of the safety electric heating cooker according to the present invention illustrating the step-shaped cooker bowl;

Fig. 5 is a schematic view of the second embodiment of the safety electric heating
10 cooker according to the present invention illustrating the cooker bowl which is in the shape of a conical cylinder;

Fig. 6 is a schematic view showing the ring-shaped backstop of the safety electric heating cooker according to the present invention; and

Fig. 7 is a schematic view showing the annually distributed backstops of the safety
15 electric heating cooker according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Embodiment 1:

As shown in **Fig. 1 and Fig. 2**, in the first embodiment, the safety electric heating cooker includes a cooker bowl **12**, an outer shell **15** and the backstop.

5 The backstop may be made of metal. It may be a separate part and in the form of a ring **112**. Said metal ring **112** is installed on the top of the inner surface of the outer shell **15**. The top brim of the cooker bowl **12** is folded outwards and hanged on the backstop **112**, thereby, air gap is generated between the outer shell **15** and the cooker bowl **12**. Alternatively, said backstop may be constructed by at least two pieces of blocks which are distributed annularly. Said backstop **112** is connected to said cooker bowl **12** by screw.

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As shown in **Fig. 3**, the backstop may be made of heat-resistant plastics. It may be a heat-resistant plastic ring, or be constructed by at least two pieces of blocks **111** which are distributed annularly. The backstop is integrated to the outer shell **15** by twice molding, so as to be convenient for assembling. The top brim of the cooker bowl **12** is folded outwards and hanged on the pieces of backstops **111**, thereby, air gap is generated between the outer shell **15** and the cooker bowl **12**.

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Embodiment 2:

As shown in **Fig. 4, 5, 6 and 7**, in the second embodiment, the safety electric heating cooker includes a cooker bowl **22**, an outer shell **25** and the backstop.

20 The cooker bowl **22** is shrunk radially at its bottom part which is in the shape of a step or a conical cylinder. Said heat-resistant backstop may be in the form of a ring **26** or constructed by at least two pieces of backstops distributed annularly. Said backstop is

installed at the inner surface and preferably at the bottom of the inner surface of the outer shell. Said cooker bowl **22** is supported by the heat-resistant backstop on its step or on the surface of the conical cylinder. Air gap is generated between the outer shell **25** and the cooker bowl **22**, whereby prevents the outer shell **25** from contacting directly with the
5 hot cooker bowl **22**.

Either the ring-shaped backstop **26** or the block-like backstops **27** may be used in the cooker bowl **22** which is in the shape of a step or a conical cylinder.